

claims 21 and 22 added in this paper. Claims 1-13 and 20 stand rejected and are now presented for reconsideration in view of the foregoing Amendments and the following remarks.

To overcome the rejection under 35 USC §112, second paragraph, each of claims 8 and 9 has been amended to delete the word "the" before "inner edges" at line 2 thereof. Accordingly, it is requested that the rejection under §112, second paragraph, be reconsidered and withdrawn.

Claims 1 and 20 were "rejected under 35 USC §102(b) as being anticipated" by the Wright reference.

As now amended, claim 1 is directed to "[s]upport apparatus for an installation of semiconductor processing equipment having a bottom outline and a plurality of load-bearing mounting feet disposed along the equipment's bottom outline". The claimed apparatus is recited to include "a plurality of support legs including at least one support leg aligned to each one of the plurality of load-bearing mounting feet" and "a frame disposed on the plurality of support legs". Claim 1 further recites that the frame has "a frame outline which substantially duplicates the bottom outline of the semiconductor processing equipment" and has been amended to recite that the frame is "configured to support the installation of semiconductor processing equipment". Support for this amendment is specifically found at page 9, line 38 through page 10, line 1 which states that "a single support pedestal 140 may be configured to support one or more pieces of manufacturing equipment."

The Wright reference is concerned with a pad on which a household appliance may be installed to protect the underlying floor against water damage from the household appliance. The Wright reference has nothing to do with a support for an installation of semiconductor processing

equipment. More specifically, the reference clearly lacks any disclosure of a frame that is "configured to support the installation of semiconductor processing equipment", as now recited in claim 1. Accordingly, it is respectfully submitted that claim 1, at least as now amended, is clearly patentably distinguished from the Wright reference. Claim 20 has been amended in the same fashion as claim 1, and is submitted as patentable over the Wright reference on the same basis as claim 1.

Claims 1-5, 7-11 and 20 were "rejected under 35 USC §103(a) as being unpatentable" over an asserted combination of prior art arrangements disclosed in the present application, taken with the Wright reference.

The Examiner relies primarily on the prior art support apparatus shown in FIG. 2 of the present application. The support apparatus of FIG. 2 is in accordance with a standard proposed by the Semiconductor Equipment Manufacturing Institute and is intended to be used for all semiconductor factory locations (see page 1, lines 33-35 of the present application). One purpose for the proposed standardized support apparatus is that the standard size of the proposed SEMI apparatus provides a reference size for architects and construction personnel.

The Examiner acknowledges that the support apparatus of FIG. 2 fails to satisfy the claimed feature of "at least one support leg aligned to each one of the plurality of load-bearing mounting feet" of the semiconductor processing equipment. However, the Examiner proposes to modify the support apparatus of FIG. 2 based on the support apparatus of FIG. 1, in which no frame is provided, but support legs extend directly from the mounting

feet of the semiconductor processing equipment to the base mount location plans on an underlying waffle-grid floor.

Applicants respectfully submit that the prior art does not support the Examiner's proposed modification of the SEMI standard pedestal. The SEMI pedestal is intended to be a manufacturing standard, to provide a standard reference for architects and construction personnel, and is not intended to be modified to match varying types of semiconductor processing equipment having various configurations of mounting feet. To modify the SEMI standard pedestal would defeat the entire purpose of the pedestal, which is that it should be standardized. Accordingly, the Examiner's proposed modification of the SEMI pedestal would make it unsatisfactory for its intended purpose, so that there is no suggestion or motivation to make the proposed modification. See, MPEP §2143.01 (citing In re Gordon, 733 F2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

Applicants accordingly submit that the Examiner's proposed modification of the SEMI pedestal runs directly contrary to the intended purpose thereof, and therefore is improper. Accordingly, there is no sound basis for the rejection of claim 1 under §103(a), and it is requested that that rejection be reconsidered and withdrawn.

Applicants further note that, to the extent that the Examiner relies on teachings of the Wright reference in rejecting claim 1, this also is not well founded. The Wright reference is only concerned with a protective pad for household appliances, and has nothing to do with installations of semiconductor processing equipment, which is the subject of the prior art apparatus disclosed in FIGS. 1 and 2 of the present application. A person of ordinary skill in the semiconductor processing equipment art would

have no reason to consider the Wright reference nor to utilize teachings thereof for the purpose of modifying prior art semiconductor processing equipment support apparatus. Thus the rejection of claim 1 is believed to be flawed on this additional ground.

Claims 2-13 are dependent on claim 1 and are submitted as patentable on the same basis as claim 1. Claim 20, which recites the combination of a frame disposed on a plurality of support legs, including at least one support leg aligned to each one of a plurality of load bearing mounting feet of semiconductor processing equipment, is also believed to be patentable by virtue of the above-noted point that the prior art support apparatus of FIG. 2 of the present application cannot properly be modified as proposed by the Examiner.

In addition, claim 6, which is dependent on claim 1, adds the additional feature that the plurality of support legs "comprises an adjustable length leg". In regard to claim 6, the Examiner proposed an asserted combination of the support apparatus of FIGS. 1 and 2 plus the Wright and Langlais et al. references. However, the Langlais et al. reference is concerned with adjustable legs for a school desk, and thus has nothing to do with support apparatus for semiconductor processing equipment. A person of ordinary skill in the semiconductor equipment art would have no reason or motivation to consult a furniture patent like the Langlais et al. reference. Thus, there is no proper basis for combining Langlais et al. with the prior art described in the present application. It is therefore submitted that claim 6 is independently patentable on this additional ground.

Claim 12 is indirectly dependent on claim 11, and recites the additional feature of "gooseneck couplings attached at a plurality of connection points". The Examiner rejected claim 12 based on an asserted combination of the prior art disclosed in the present application, taken with the Wright and Johnson references. However, the Johnson reference is only directed to a plumbing fixture for connecting to a washing machine or dishwasher, and has nothing to do with plumbing connections for semiconductor processing equipment. Thus, one of ordinary skill in the art would not have consulted with the Johnson reference or attempted to apply the teachings of the Johnson reference to the problem of installing semiconductor processing equipment. It is therefore submitted that the rejection of claim 12 under §103(a) is improper, and that claim 12 is independently patentable on this additional ground.

Claim 13 is dependent on claim 1 and adds the additional feature of "a plurality of seismic braces each affixed to one of the support legs and adapted to fix to a piece of semiconductor processing equipment to be supported by the support apparatus".

In rejecting claim 13, the Examiner relied upon the container security device disclosed in the Bush et al. reference. The security device of Bush et al. protects against seismic events with straps that are attached from corners of a material container through a bracket on a containment assembly. However, the security device of Bush et al. does not disclose a seismic brace which is affixed to a support leg. As noted above, the straps of Bush et al. are attached through brackets on a containment assembly, and not affixed to support legs. Accordingly, it is submitted that the Bush et al. reference fails to disclose the seismic

braces as specifically recited in claim 13, and that claim 13 is accordingly independently patentable on this additional ground.

New claims 21 and 22 have been added in this paper to more completely cover the invention. Of the new claims, only claim 21 is in independent form.

Claim 21, like claim 20, recites a frame disposed on a plurality of support legs, the frame being configured to support the installation of semiconductor processing equipment, and at least one of the support legs being aligned to each one of a plurality of load-bearing feet of the semiconductor processing equipment. Accordingly, claim 21 is submitted as patentable on the same basis as claim 20. Claim 22 is dependent on claim 21 and is submitted as patentable on the same basis as claim 21.

A separate Request for One-Month Extension of Time and the requisite fee are enclosed herewith. Applicants do not believe any other fees are due regarding this amendment. If any additional fees are required, however, please charge Deposit Account No. 04-1696. Applicants encourage the Examiner to telephone Applicants' attorney to discuss the amendment should any issues remain.

Respectfully submitted,



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VERSION MARKED TO SHOW CHANGES

in the Specification:

The following new paragraph has been added after page 4, line 9:

FIG. 4A is a cross-sectional view of a frame portion of the support pedestal of FIG. 4;

The paragraph beginning at page 6, line 37 has been amended as follows.

FIG. 4 is a schematic top perspective view of a support pedestal 140 configured in accordance with the present invention. The inventive support pedestal 140 comprises a support frame 145 having a plurality of support legs 141 extending downward therefrom. The support frame 145 has a frame outline which substantially duplicates the bottom outline of the mainframe 117 of the manufacturing equipment 111, with the "bottom outline" of the mainframe 117 being defined by the lower frame of the mainframe 117 itself. In one aspect the support frame 145 may be monolithic so as to provide the enhanced support integrity which comes from a "seamless" frame. The support frame 145 includes brackets 147 for engaging the load-bearing mounting feet of the manufacturing equipment (if any). The support legs 141 are adjustable and comprise an outer leg section 144 fixedly mounted (e.g., bolted or welded) to the support frame 145, and an inner leg section 142. The inner leg section 142 is slideably mounted in the outer leg section 144, so that the length of the support legs [142] 141 can be adjusted and, once optimized, locked in place by bolting or welding the inner leg section 142 to the first outer leg section 144. The support legs 141 are disposed on base mount location pads

143, which can be affixed (e.g., removably via bolts, or welded) to the support legs 141 prior to installation or can be provided at the installation site. Additionally affixed to the support legs 141 are optional seismic braces 149. A first end of each seismic brace 149 is fixedly mounted to a support leg 141 as shown, (or alternatively could be attached directly to the waffle grid flooring) while a second end of the seismic brace 149 is provided for attachment to the manufacturing equipment 111 upon installation thereof.

The paragraph beginning at page 7, line 30 has been amended as follows.

The inventive support pedestal 140 includes at least one facilities connection locator 150 which is fixedly mounted to the support frame 145 and which establishes the facilities connection locations, representatively shown as the four facilities connection locations 151-154, which exactly match the facilities connection points on the manufacturing equipment 111. Optional outer flanges 158 (FIG. 4A, not shown in FIG. 4) at the periphery of the support frame 145, as well as optional inner flanges 159 (not shown in FIG. 4) are provided for supporting raised flooring (as shown in FIG. 5).

The paragraph beginning at page 9, line 16 has been amended as follows.

The support pedestal 140 is adaptable to specific manufacturing equipment configurations, as illustrated in FIG. 6. For the installation of a semiconductor processing system, such as is depicted in FIG. 1, which includes not only the mainframe processing unit 117 but also the factory interface 114 with [loadlock] loadlocks 113 and 115 and a

process chamber 119, the support pedestal 140 can be augmented with at least one additional support 160, including an additional frame 165 supported by additional support legs 161 extending to additional base mount location pads 163 to support the factory interface 114, the loadlocks 113, 115 or the processing chamber 119 (FIG. 1). The components of the [addition] additional support 160 may be configured in the same manner as the components of the support pedestal 140 with adjustable legs 161 positioned below load bearing mounting of the manufacturing equipment positioned on the additional support 160 and/or frame 165 that duplicates the bottom of the manufacturing equipment. The additional support component 160 may be joined to the support pedestal 140 by connecting segments 167. Alternatively, however, the pedestal frame [140] 145 can be extended to include the support for the additional manufacturing equipment (e.g., the processing chamber 119). Thus, a single support pedestal 140 may be configured to support one or more pieces of manufacturing equipment or a plurality of support pedestals may be coupled directly or via a connecting segment 167. In this example of FIG. [5] 6, the support pedestal 140 includes an additional facilities connection locator 170 with additional facilities connection locations (171 of FIG. 8) as needed (e.g., for the additional processing chamber 119).

In the Claims:

Claims 1, 8, 9, 11, 13 and 20 have been amended as follows.

1. (Amended) Support apparatus for [manufacturing] an installation of semiconductor processing equipment having a bottom outline and a plurality of load-

bearing mounting feet disposed along the equipment's bottom outline comprising:

a plurality of support legs including at least one support leg aligned to each one of the plurality of load-bearing mounting feet; and

a frame disposed on the plurality of support legs, the frame having a frame outline which substantially duplicates the bottom outline of the [manufacturing] semiconductor processing equipment, the frame being configured to support the installation of semiconductor processing equipment.

8. (Amended) The support apparatus of Claim 1 further comprising flanges along [the] inner edges of the frame to support raised flooring.

9. (Amended) The support apparatus of Claim 7 further comprising flanges along [the] inner edges of the frame to support raised flooring.

11. (Amended) The support apparatus of Claim 10 wherein the at least one facilities connection locator provides a plurality of connection points for connecting site facilities to the [manufacturing] semiconductor processing equipment.

13. (Amended) The support apparatus of Claim 1 further comprising a plurality of seismic braces each affixed to one of the support legs and adapted to fix to a piece of [manufacturing] semiconductor processing equipment to be supported by the support apparatus.

20. (Amended) Support apparatus for
[manufacturing] an installation of semiconductor processing
equipment having a bottom outline and a plurality of load-
bearing mounting feet disposed along the equipment's bottom
outline comprising:

a plurality of support legs including at
least one support leg aligned to each one of the plurality of
load-bearing mounting feet; and

a frame disposed on the plurality of support
legs, the frame being configured to support the installation
of semiconductor processing equipment.